

AN EVALUATION OF THE USEFULNESS
OF THE ASSESSMENT CENTER IN
PERSONNEL SELECTION AND PROMOTION

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ASSESSMENT CENTER IN PERSONNEL SELECTION AND PROMOTION

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CHAPTER I

INTRODUCTION

Among the most important decisions made by the managers of a firm are those concerning the selection of the organization's managers and future managers. Failure in this area can cause the firm to falter. Success can mean continued growth and profits. For these reasons, much effort, time and money has been devoted to developing selection techniques. Various methods such as interviewing, checking references, giving physical examinations and reviewing past performance are commonplace. Scoring biographical data or the use of "knock-out factors" on application blanks has been used. Very sophisticated personality tests and inventories have been used by some firms. Some organizations, reportedly, have used graphology and phrenology in their selection procedures. These methods have met with questionable success and most have low validities with

variances accounting for only a small percentage of any reported success.¹

Indications of the failures of personnel selection procedures are found in the pages of Laurence J. Peter and Raymond Hull's book, The Peter Principle.² This book dwells on how an individual rises to his level of incompetence and how he may cope with the frustrations confronting an individual when faced with filling a position above one's "level." Further indications are found in the writings of several authors in their essays on managerial obsolescence. Fault is placed in several areas, one of which is the management selection process.

Research Question

In this paper, it is intended to look briefly at several methods of personnel selection. Somewhere in them there may be a weakness, evidenced by the Peter Principle arising along with managerial obsolescence, enough to cause

¹Dale Yoder, Personnel Management and Industrial Relations (5th ed.; Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1965), pp. 322-51.

²Laurence J. Peter and Raymond Hull, The Peter Principle (New York: William Morrow and Company, Inc., 1969).

significant success of Peter's book and considerable belief in its contents. Robert C. Albroom in a brief article offers that the assessment center method of personnel selection and promotion might provide a lessening of this problem.¹ It is to this point that this paper is directed. The research will be conducted to respond to the following primary research question: Can the assessment center method of personnel selection decrease the exposure of the organization to the undesirable effects of the Peter Principle? Answers will be sought to the following subsidiary research questions:

1. What is the Peter Principle?
2. What are the methods of personnel selection?
3. What is the assessment center?
4. How has the assessment center been used?
5. What has been the success of the assessment center?
6. Has the assessment center been more effective than other methods of personnel selection?
7. Can the assessment center be of assistance in insuring that a minimum number of personnel reach their levels of incompetence?

¹Robert C. Albroom, "Why There's So Much Incompetence in Business," Fortune, March 1, 1969, pp. 203-4.

The Scope and Limitations of the Study

The assessment center is presently used by a few, and in most cases large, organizations. Data, of necessity, comes from these few applications. The data is all current since the mid-Fifties. Professional journals, not infrequently, contain discussions of this selection technique. More recently, it has received coverage in the less professional periodicals, and even in the New York Times. The prediction of the Times is that we will see more of it in the future.¹ Few books have been written specifically on the assessment center, but it is being covered more frequently in texts on personnel administration and psychological testing methods. These sources have been used in the research for the preparation of this paper.

It is the intent of the author of this paper to present much of this diverse information in one document from a business administration point of view. Additionally, it is intended to provide some insight into the uses of the assessment center, along with its successes, in hopes that future applications of this procedure might be furthered.

¹Leonard Sloane, "Assessing Talent: Exercises Simulate Business Situations," New York Times, November 28, 1971, pp. 3 and 8.

The Organization of the Study

In Chapter II, research will be conducted to examine both the Peter Principle and executive obsolescence to define them and determine what might be done to minimize their occurrence. Actions will be cited that may be taken by both the individual and the organization. In Chapter III, the popular methods of personnel selection and promotion will be discussed. This discussion will be limited to the methods of personal preference, interviewing, psychological testing, the behavioral approach, selection by objectives, and the simulation method while recognizing that other methods are available and utilized. The strengths and weaknesses of each method will be recognized. The major portion of this paper will be devoted to the discussion of a version of the simulation technique--the assessment center. Chapter IV is devoted to this discussion. Here, the assessment center history, procedures and methodology will be evaluated. In Chapter V, the discussion will be concentrated on the specific applications, the validity of the procedure, the benefits and problems of the method, and a look at the possible future of the center. Finally, in Chapter VI, a concise summary will be made and the conclusions emerging from this study will be stated and discussed.

CHAPTER II

EVIDENCES OF PERSONNEL INCOMPETENCE

The Peter Principle

Dr. Peter claims to have done much theorizing on the incompetence of people in performing their jobs. His study developed files of cases of incompetence with which he developed his theory. His main thesis, known as the Peter Principle, is that "in a hierarchy, every employee tends to rise to his level of incompetence." He indicates that personnel rise to their level of incompetency from a level of competent performance.¹ This thesis seems to indicate that too much emphasis is placed upon previous performance in personnel promotion policies. Peter states a Corollary to this principle that "in time, every post tends to be occupied by an employee who is incompetent to carry out its duties."² Logically, one asks the question how does any work get done if the theory holds true. Peter

¹Peter and Hull, The Peter Principle, pp. 24-5.

²Ibid., p. 27.

answers that "work is accomplished by those employees who have not yet reached their level of incompetence." Peter feels that it is unusual to have an organization in which all employees are at their incompetence level.¹

Some authors feel exceptions to this principle have been seen which Peter denies. He labels the apparent exceptions as "the percussive sublimation" and "the lateral arabesque." Both are organizational recognition of a person's reaching his level of incompetency and both are transfer moves to positions to decrease the effect on the organization. The first being a move to a higher level, but less important position; the latter, a lateral move to a less important position.² Evidences of this type action can be seen in many organizations.

Robert C. Albroom labels the book as satire of only mediocre success. However, he points out that the Peter Principle is receiving wide attention from large organizations and suggests that Peter is becoming a recognized authority on incompetence. For weak satire to become this successful, it must have something else in it; Albroom contends "a serious, rather haunting, and perhaps useful

¹Ibid.

²Ibid., pp. 36-40.

idea."¹ This paper is focused on this main thesis and not upon Peter's psydo-scientific jargon and amusing examples of incompetence. It takes humor or satire to get one to acknowledge he is a sufferer. One would deny all if presented in a scholarly epistle.²

Albrook goes on to contend that the real emphasis of the book is to show the weakness of promotion systems weighted too heavily in the area of past performance and too lightly in expected future expected performance.

Executive Obsolescence

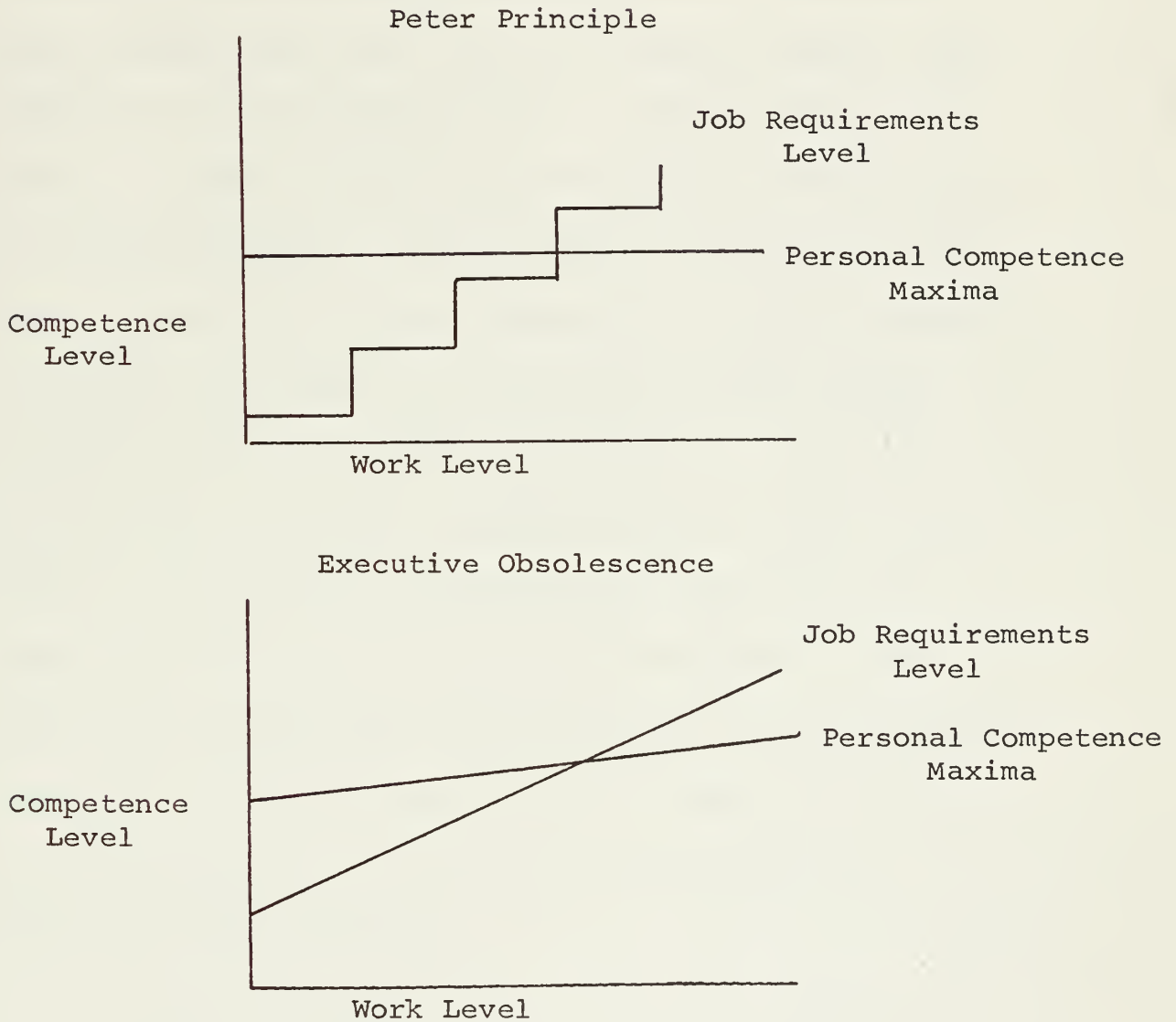
A more palatable label for the incompetence phenomena discussed above is that of executive obsolescence. This label connotes a broader coverage of the problem and it expands the reasons for the occurrence; hence, a wider range of situations is applied to the problem of executive obsolescence. The Peter theory occurs with a promotion, while obsolescence develops or evolves over time. Graphically, Figure 1 shows the differing interpretations.

¹Albrook, "Why There's So Much Incompetence," p. 203.

²A satirical comment on the Peter Principle comparing it to Parkinson's Law can be found in Arthur J. Riggs, "Parkinson's Law, the Peter Principle and the Riggs Hypothesis - A Synthesis," Michigan Business Review, XXIII (March, 1971), 23-5. Riggs develops a more complex model which may or may not make the problem more understandable.

FIGURE 1

COMPARISON OF PETER PRINCIPLE TO EXECUTIVE OBSOLESCENCE



Executive obsolescence may be brought about by many factors. Abrupt changes made in organizational structure or in the requirements of a job cause it quickly. It may slowly come about as job requirements slowly change with time, but the incumbent resists this change or only progresses slowly. Another cause, quite common in today's profit-margin-conscious business world, is the mass layoff of excess numbers of managers. The expert buggy whip maker provides another source in that his skills, no matter how good, are no longer needed. Applied to the whole buggy whip industry, we see the similar cause magnified. Another factor, again common today, is the failure of managers to change with the times and accept new attitudes and approaches to what may not be new problems and conditions.¹ Obviously, the manager of today who feels all male persons with long hair are hoodlums is a liability to his firm when reflecting this attitude.

Roy V. Edwards of Wilson & Co., Inc. labels it "The Loman Syndrome" after Willy Loman of Arthur Miller's "Death of a Salesman." Edwards feels it is caused by

¹Walter R. Mahler, "Every Company's Problem: Managerial Obsolescence," in Executive Leadership, ed. by Phillip Donald Grub and Norma Maine Loeser (Wayne, Pennsylvania: MDI Publications, 1969), pp. 369-70.

"employees of all ages who cannot profit from increased challenges and opportunities." Employees "cease to hunger and thirst for knowledge--new ways of doing things."¹

Another view, though not completely different from above, emphasizes the rapid technical changes taking place and the emphasis being placed more and more today on the results-oriented appraisal for managers. Managers are proving more and more incapable of coping with these new visions of old responsibilities and begin their descent to the level of "executive dropout." An organization is then faced with the problem of the executive who comes to work every day, but has psychologically retired on the job.²

Summarily, it seems that executive obsolescence is caused by the inability of executives or managers to keep pace with the changing requirements of the job, or industry's resistance to change; and hence, an inability to change with

¹Roy V. Edwards, "Professional Obsolescence," S.A.M. Advanced Management Journal, XXXVI (January, 1971), 10-11.

²Peter Schoderbek and Lynn Bryant, "Executive Dropout," Personnel Administration, XXXI (January-February, 1968), 47. While I readily agree with their retirement on the job concept, I cannot accept their statement that the educational world is not suffering from this also. Tenure does not recognize the loss of worth of the "dropout." Peter shows ample examples of its presence.

the times. It presents an organizational problem and a social problem because these are the people who have brought the organization to a point where change is needed and required for growth. These people should not be written off as fully depreciated assets, but neither can they be accepted as continuing liabilities. The next section will offer possibilities for deterrence or alleviation of this problem.

Personal Actions to Face Incompetence

Peter offers several suggestions for the person at the level of incompetency or one who realizes he is at his final level of competency. When one realizes he has "arrived", Peter offers the possibility of substitution that would involve the personal acceptance of a set of duties, not the proper ones for the job, which are accomplished by the individual. These may include endless preparation, studying alternatives, confirming needs, or obtaining expert opinions. These substitutions are performable tasks confronted by the executive that preclude ever facing the real tasks. One may specialize in a small part of the job or dwell on the background or image and avoid ever facing the "meat" or whole of the matter. Another

alternative is what Peter labels "Utter Irrelevance." It involves spending full time on a task completely unrelated to the job such as fund-raising campaigns or other voluntary or social activities. Hence the work is delegated by absence to those who may not have reached their "level."¹ While Peter may have been writing these principles in satire, there is a ring of truth, and their presence is seen in many organizations. Obviously, these solutions to incompetence are of no profitable value to the firm. They are strictly for the individual who desires to maintain his "dropout" status.

Organizational Action to Prevent Incompetence

Albrook suggests that organizational hierarchies develop a reward system, separate from promotion, emphasizing that promotion is not a measure of success. An organization "must say and mean that every job from lowest to highest is supposed to be done well. Quality of performance...should become the main reward axis." He suggests "turning the [organization] chart on its side" to accomplish this. Hence

¹Peter and Hull, The Peter Principle, pp. 128-36.

upward movement will mean optimizing talents and experience with job requirements.¹

Mahler suggests a number of corporate actions to stave off the threat of incompetence. Among them are managing by results, encouraging employees to keep on learning, use of an active management development program, a clear requirement for superiors to honestly appraise current performance and realistically estimate ability for performance in bigger jobs, forecasting of managerial and organizational needs, and a more effective system of making placement and promotion decisions.² It is on this last point that this paper will be focused.

The goal setting and educational objectives are echoed by Roy Edwards. He also warns against overspecialization. By keeping the executive more of a generalist, the susceptibility to dropout is lessened.³ Edwards reemphasizes the educational need to keep experienced and faithful employees current. He also affirms the management of change. "Change is the very essence of

¹Albrook, "Why There's So Much Incompetence," p. 204.

²Mahler, "Every Company's Problem: Managerial Obsolescence," pp. 373-74.

³Schoderbek and Bryant, "Executive Dropout," 50.

man, for if he does not change, he does not grow and, thereby, renders himself obsolete." In the management of change, it is possible to manage people to change and hence minimize their becoming obsolete.¹

Minimizing Occurrence

As discussed above, there are several ways to face the incompetence or obsolescence problem. Perhaps the most emphasized one is that of education which requires both personal and organizational encouragement and action.² One area that has not received as much recognition is that of personnel selection and promotion procedures. If through these procedures, it is possible to estimate when obsolescence or incompetence will occur, or at least identify it before it does occur, great benefit will accrue to the organization. This point is examined in the remainder of this paper. In other words, can the selection process minimize the occurrence of this problem?

¹Edwards, "Professional Obsolescence," 13-14.

²An article in the Wall Street Journal, January 24, 1966, pp. 1 and 12, provides more numbers and examples of what is happening in this area in several companies.

CHAPTER III

METHODS OF PERSONNEL SELECTION

Before a discussion of personnel selection and identification begins, a differentiation between the two terms should be made. Selection is the process of evaluating and choosing among the various candidates for a given position. Identification is more future oriented, and more ambitious than selection, in that it attempts to predict one's capacity for development and effective performance at higher levels of responsibility and in different organizational situations.¹ The methods of selection and identification listed below can be used for either situation with varying degrees of effect. The choice of the most useful method, however, may depend upon its desired use by the organization.

¹Edwin L. Miller, "Identifying High Potential Managerial Potential," Michigan Business Review, XX (November, 1968), 12.

Personal Preference

The most common method of personnel selection is that of personal preference whereby a manager selects on the basis of "gut feelings," hunches, or certain feelings about an individual's chances for success.¹ It can be justified on the basis that it is a proprietary right of the owner to hire and not hire as he sees fit. The Civil Rights Act of 1964, if applicable, limits the exercise of this right in the interest of the public.² Possibility of prosecution under this law provides a major weakness of this selection procedure. Other weaknesses of this method are that the information on which a preference is based may not be relevant. This method cannot be standardized among different interviewers. One person may be quite successful with this method, but this provides no indication that another will be, even in the same organization working for the same boss. As this method depends upon personal judgment, feelings and emotions, it is difficult to quantify.

¹Cabot L. Jaffee, Effective Management Selection (Reading, Massachusetts: Addison-Wesley Publishing Company, 1971), p. 5.

²George S. Odiorne and Edwin L. Miller, "Selection By Objectives," Management of Personnel Quarterly, V (Fall, 1966), 4. ✓

Furthermore, it provides no base for future selections and no realistic method of self correction to the selection system. "This latter point is perhaps the most crucial, for it means that the personal preference method of selecting supervisors allows too many mistakes."¹

Psychological Testing

A second common method of selection and identification is psychological testing. This method has been attacked recently for several reasons and it also raises the Civil Rights question. Some authorities consider it an invasion of privacy. When cited out of context, many of these questions raise serious doubts among untrained evaluators.² Three types of these tests are discussed below.

Aptitude Tests

The need for aptitude prediction has arisen due to the size of losses and waste in the selection procedure. Aptitude testing is a sampling of human behavior. By measuring differences in reactions, a prediction of future human behavior is made. The test depends upon the correlation of a normally distributed variable with a normal distribution

¹Jaffee, Effective Management Selection, p. 5.

²Odiorne and Miller, "Selection By Objectives," 4.

of acceptable performance. The matching theoretically eliminates persons with little likelihood of success. Aptitude testing gained great popularity after its use by the Army in World War I. Initially it received rapid acceptance, then rejection, and today, is growing again, but with both success and failure. It has been proven helpful for staffing decisions concerning some occupations like clerical work and salesman type work, but only of limited success in managerial selection.¹

Personality Tests

Job success is only partially determined by ability. Much is dependent upon the personality and desire of the worker. Hence an additional test is needed along with the aptitude test. The personality tests are utilized here in an attempt to ascertain whether the worker will do the job if selected. Odiorne and Miller state that many of these tests have not been validated for managerial performance. The relevance of the traits that these tests predict reflect the desires of an individual on what he feels is best to fill a job. This type test would tend to stereotype organizational management talent which could create future problems. Odiorne

¹Ibid., 4-5.

and Miller state, however,

that the validities of personality tests are low enough so that the consistent use of any of the personality tests will allow enough people to slip by that the organization will be protected against poor judgment about the qualities it thinks it is selecting.¹

Theodore Guyton feels there is a need for identifying and testing for personal characteristics. He sets forth the following three step procedure, (1) prediction of the criteria of executive success, (2) identifying predictive traits in successful executives, and, (3) to develop valid measures of the traits selected above. He feels that "there is. . .sufficient evidence to show that testing instruments have a significant degree of validity in identifying successful executives."² He further cites research conducted at Sears Roebuck and Company in this area which leads him toward two conclusions. First, the "characteristics associated with executive success in a given environment can be identified." Second, the "instruments to validly measure these characteristics early in an individual's career can be developed."³

¹Ibid., 5.

²Theodore Guyton, "The Identification of Executive Potential," Personnel Journal, XLVIII (November, 1969), 866-8. ✓

³Ibid., 871.

Another technique of personality appraisal was discussed in a much earlier work by Erwin K. Taylor and Edwin C. Nevis. They cited information indicating that seven times as many executives failed for lack of proper personality than lack of technical skill. Higher level jobs involve an intermingling of interpersonal relationships, and goals can be achieved only through these relationships. Hence the strong need for personality testing.¹ They felt that more scientific projective techniques such as the Rorschach Test, the Thematic Apperception Test (TAT), sentence completion and word association methods, and the Rosenzweig Picture Frustration Study may be useful. They concluded that few quantitative studies of effect have been conducted in this area and those "active in this area must proceed on the basis of our [sic] best professional judgment."²

Intelligence Tests

Jaffee briefly mentions the intelligence test as a selection device, but feels there is no apparent cutoff

¹Erwin K. Taylor and Edwin C. Nevis, "The Use of Projective Techniques in Management Selection," Personnel, XXXIII (March, 1957), 462. ✓

²Ibid., 464-73.

score that would eliminate failures while not shutting out successes. He cites research data which leads to the conclusion that "there is a moderate relationship between intelligence and success as a supervisor, but in most cases it apparently is not strong enough to justify the selection of supervisors solely by this means."¹

General Rules of Caution

Dale Yoder offers some general rules of caution to be used in testing which should be mentioned here to generally highlight potential weaknesses of testing. First, tests should be used to supplement other techniques of selection, and not as a replacement to them. Second, validity of tests must always be checked, except in the case of simple performance tests. Third, tests for selection as a rule indicate what an applicant can do, rather than what he will do. Fourth, tests are more useful in the negative sense of spotting possible failures, rather than the positive sense of predicting possible success.²

¹Jaffee, Effective Management Selection, p. 6.

²Dale Yoder, Personnel Management and Industrial Relations (5th ed.; Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1965), p. 344.

Employment Interviews

Yoder feels that the most widely accepted practice in selection is the employment interview. He feels regardless of expressions otherwise, other methods serve to supplement the interview.¹ This feeling seems to coincide with Jaffee's, and Odiorne and Miller's feelings on personal preference. The interview is most susceptible to expressions of the interviewer's feelings and emotions. More than one interview may be conducted at different stages in the selection process to correlate results of different interviewers in an attempt to reduce error. The interview is usually quite directive with the interviewer directing the discussion towards points that he considers of import. Interviews conducted in the more advanced stages of selection are often structured to insure comprehensive coverage of all subjects the organization feels necessary for success. Recently some organizations have used a panel interview. This technique is thought useful because it allows a pooling of judgments and acquaints the interviewee with several important members of the organization. Yoder lists dangers due to the halo effect and erroneous inference.

¹Ibid., p. 330.

He feels many managers resort to, and place emphasis on, their considered ability to read character and personality during the interview, or what has been labeled personal preference. The dangers of interviewing can lead to managerial stereotyping. Yoder feels that the "proportions of correct forecasts [from interviewing] are still discouraging."¹

Behavioral Approach

Another approach toward selection is the behavioral or skills approach. This method directs itself less to inner traits and more towards outward behavior which can be observed and measured. In its simplest form, it may be a trade test to check typing or shorthand ability, or to determine if a person actually is skillful at the trade he professes.

A further application of this method by Robert N. McMurry combines personality, aptitude and behavior history to attempt prediction of performance on future assignments. This method presumes behavior in the past is indicative of behavior in the future. It is the work of the interviewer

¹Ibid., pp. 330-4.

to uncover these "patterns of behavior" which are presumed persistent in the future.¹ Odiorne and Miller feel this method is most apt to achieve conformity in hiring and "that it deals mainly with behavior and not with the effects of that behavior in results."²

Selection by Objectives

The method of selecting by objectives ties in closely with management by objectives, and is proposed and described in detail by Odiorne and Miller.³ Basically, it is a background and behavior approach. This method sets forth the objectives of a job to be filled. The job is described by these objectives rather than the traditional skills, experience, and man requirements. The selection process looks for "predictors in an individual's history which would point up probabilities of his operating" in the job

¹Odiorne and Miller, "Selection By Objectives," 6. ✓
A deeper discussion of a behavioral approach is found in Everett G. Dillman, "A Behavioral Science Approach to Personnel Selection," Academy of Management Journal, X (June, 1967), 185-98. This discussion considers more fully the principles of group behavior. The candidate is considered on how he will accept existing expectations and constraints, how these will effect him, and how he will effect this expectation-constraint structure.

²Ibid., 6-7.

³Odiorne and Miller, "Selection By Objectives," 7-10.

described. The assumption of this method is that upward movement in an organization is based upon problem solving at lower levels.¹ Jaffee feels this method has merit if an individual has experience that can be related to the new job objectives. However, this, at times, is not the case as in hiring hourly workers into the first line of supervision, and at times in moving between companies where job expectations differ.²

Simulation

Simulation attempts to duplicate the critical aspects of a job and provide standardized conditions under which individuals are given a chance to exhibit skills in those areas deemed critical to that position. Candidates for supervisory positions are put through certain exercises while their behavior is evaluated by a group of observers selected for the purpose.³

It is in this category that the assessment center fits.

In the assessment center process, normally twelve candidates are observed simultaneously by six assessors for a period of one to three days. During this period, the candidates go through various simulation or situational

¹Ibid.

²Jaffee, Effective Management Selection, pp. 6-7.

³Ibid., p. 7.

exercises such as business games, in-basket problems, and leaderless group discussions. During this period, there may also be interviews and psychological tests. As the tests are standardized, the candidates can be fairly rated against each other for selection or identification purposes. Feedback from the center can advise the participant of correctible weaknesses, or strengths to apply in future endeavors. Through the situational exercises, it is possible to observe the skills necessary at higher levels in the organization.¹ Saul Gellerman reports this method to be an "effective predictor" with the "best overall predictions. . .based . . .on combinations of situational and other tests."²

As stated earlier, this paper will focus mainly on this assessment center approach to the selection and identification of personnel. As stated above, this method is not divorced from other methods of selection, but rather some other techniques are incorporated in it.

¹William C. Byham, "Assessment Centers for Spotting Future Managers," Harvard Business Review, XLVIII (July-August, 1970), 150-67. William C. Byham, "The Assessment Center as an Aid in Management Development," Training and Development Journal, XXV (December, 1971), 10-22. ✓

²Saul Gellerman, Management by Motivation (New York: American Management Association, 1968), p. 121. ✓

This in itself is not unusual. Yoder discusses the "successive hurdles in selection"¹ which aptly shows the combination of various techniques used by an organization in its attempt to properly select the best candidates. An organization cannot normally be said to employ a single method exclusively, but rather a combination of various methods they feel best suited. This combination was seen as successful in McMurry's behavioral approach as well.² It appears that better results come from a correlation of results from the various methods.

¹Yoder, Personnel Management and Industrial Relations, p. 324.

²Odiorne and Miller, "Selection By Objectives," 6-7.

CHAPTER IV

THE ASSESSMENT CENTER

History

The phrase "assessment center" in its context inferred here was first used by Professor Henry Murray of Harvard University in relation to work on personality research in the 1930's. Generally, this term

refers to a standardized program which employs a variety of objective, projective and situational tests, as well as interviews and sociometric exercises; and a committee of assessors is used to arrive at certain kinds of conclusions about the assessees. Individual test results, etc., are usually combined judgmentally and not statistically.¹

The first recognized use in the United States of an assessment center was at the Office of Strategic Services during World War II where Murray used it² to

¹D. L. Hardesty and W. S. Jones, "Characteristics of Judged High Potential Management Personnel - The Operations of an Assessment Center," Personnel Psychology, XXI (Spring, 1968), 85.

²Frank DiCostanza and Thomas Andretta, "The Supervisory Assessment Center in the Internal Revenue Service," Training and Development Journal, XXIV (September, 1970), 12.

select agents for various vital missions.¹ They defended the assessment center use on the basis that it "led to a more accurate study of a man's varied components of personality."²

The assessment center technique was also used in the German Officers Program, the British War Officer Selection Boards, and the British Civil Service Selection Boards to overcome the recognized shortcomings in traditional pencil-and-paper tests.³

Even though the O.S.S. successes with the assessment center were published shortly after the war, applications to industry were not considered until the middle Fifties. In 1956, American Telephone and Telegraph Company developed the model of the existing industrial assessment center for use in its Management Progress Program. This was purely a research effort to obtain information about managers starting their careers with the Bell System. The first

¹ Leonard Sloane, "Exercises Simulate Business Situations," New York Times, November 28, 1971, p. 3.

² James M. Sakoda, "Factor Analysis of OSS Situational Tests," The Journal of Abnormal and Social Psychology, XLVII (1952), 843.

³ Hardesty and Jones, "Characteristics of High Potential Personnel," 86.

non-research application was in 1958 at Michigan Bell. Here an adaptation of the Management Progress Study model was developed which could be operated by specially trained line managers.¹

Since this time, the Bell System has developed more than fifty regional assessment centers.² The concept has spread to over 100 organizations. More than twenty studies have been conducted on the effectiveness of the procedure. Present indications tend to favorably support further growth and development of the concept in the future.

2. Procedures

Leonard Sloane, in a New York Times article, describes the assessment center as

an evaluating procedure generally consisting of five to eight business tasks or 'management games' designed to confront a candidate for a higher job with the kind of managerial problems he would face in that position.³

Wikstrom in his Conference Board Record article states that

¹Walter S. Wikstrom, "Assessing Managerial Talent," The Conference Board Record, IV (March, 1967), 39.

²Ibid.

³Sloane, "Exercises Simulate Business Situations," p. 3.

it is particularly adaptable in selecting future foremen from craftsmen when there is no common basis of comparison.¹

Hardesty and Jones view the assessment center programs as follows:

In these programs a variety of assessment techniques are used and results are then provided to a committee composed of individuals who are aware of general company job requirements. The information collected is organized and certain conclusions are arrived at about the assessees. Both are made available to management in the form of an assessment report. At a later date, the personnel decisions which were made with the aid of assessment information can be compared with decisions which were made without the aid of assessment information (control groups). If the assessment program has been a good one, and the information has been correctly used, the decisions made with the advantage of assessment information should have more often resulted in better outcomes than those made without assessment information.²

There are a set of procedures which are followed before an assessment report is generated. William C. Byham points out "there is no right or wrong way to structure a center."³ Each assessment application is designed to fit

¹Wikstrom, "Assessing Managerial Talent," 39.

²Hardesty and Jones, "Characteristics of High Potential Personnel," 86.

³Byham, "Assessment Centers For Spotting Future Managers," 152.

the needs of the organization. (This, in fact, is one of the beauties of the assessment center procedure.) One system, implemented at Union Carbide's Oak Ridge Gaseous Diffusion Plant, sets the order as (1) candidate recommendation, (2) an interview of participants to insure interest and participation willingness, (3) a formal screening of personnel records, (4) participation in the assessment center operation, (5) the final panel evaluation and (6) the final panel report including feedback to the assessee.¹

As stated above, each center varies with the requirements of the organization. The actual operation of the assessment procedure takes from one to three days. Up to twelve candidates may be assessed together--with six or twelve candidates as the normal number. Less can be assessed, but this causes a great reduction in the observation of group interaction in assessment activities. Formal evaluation and report writing takes another couple days after the completion of the formal activities. So

¹J. M. Bender, O. L. Calvert and C. L. Jaffee, Report On Supervisor Selection Program Oak Ridge Gaseous Diffusion Plant (Oak Ridge, Tennessee: Union Carbide Corporation Nuclear Division Oak Ridge Gaseous Diffusion Plant, 1970), pp. 13-21.

the entire procedure from the point of view of the assessor may take a whole work week. The number of assessors is reported to vary between a one-to-one ratio and a one-to-four ratio with assessees; the most common ratio is probably one to two. During the operation of an assessment center, a candidate will likely participate in a business game, complete an in-basket exercise, participate in two group discussions, take some paper-and-pencil tests, be interviewed, and participate in an individual exercise.

Byham, in his Training and Development Journal article, presents a typical two-day procedure:

Day 1:

Orientation meeting

Management Game with four man teams

Background interview for one and one-half hours

Group discussion on management problems

Individual fact-finding and decision making

exercise

Day 2:

In-basket problem followed by an interview
concerning problem completion

Assigned role on a leaderless discussion problem

Analysis, presentation and group discussion problem.¹

In his Harvard Business Review article, Byham presents an outline of a possible three-day center which is based largely upon J. C. Penney's programs.

Monday:

Orientation

Business Game

Interview by assessor

Psychological testing

Assigned role group discussion

Study employment interview procedures and applicant resumes for following day exercise

Receive "Irate Customer Phone Call"

Tuesday:

In-basket exercise

Conduct employment interviews

Group discussion disciplinary cases

Prepare written financial recommendations

Wednesday:

Present individual financial analysis

¹Byham, "The Assessment Center as an Aid," 19.

Group reconciles and consolidates a single analysis

In-basket interview

Candidates rate each other.¹

Jaffee outlines a one-day schedule that he feels is not "unduly taxing" for the candidates:

8:30-8:45	Introduction
8:45-10:45	Assigned role group discussion
10:45-11:00	Break
11:00-12:00	Business game
12:00-1:00	Lunch
1:00-2:00	In-basket exercise
2:00-2:30	Interview
2:30-3:00	Break
3:00-4:15	Leaderless group discussion. ²

As can be seen above, there are four distinctive exercises in these various schedules: The in-basket problem, The leaderless group discussion, The business game, and The individual presentation or role playing (not in Jaffee's schedule). There are two types of leaderless group

¹Byham, "Assessment Centers For Spotting Future Managers," 162-3.

²Jaffee, Effective Management Selection, p. 15.

discussions--the assigned role where a candidate supports an assigned position, and the free discussion where a candidate must develop his own point of view. Below the individual exercises will be discussed in more detail.

3 Simulation Exercises

As set forth above, there are four different games or simulation exercises used in most assessment centers. Each is designed to reveal certain behavior traits which are combined to formulate an overall assessment rating. Below the various exercises are discussed with several examples of each presented.

The Business Game

Jaffee states that the business game is a set of structured tasks in a dynamic situation which one might expect to encounter in a real life situation. It is a group exercise; due to its dynamic nature, decisions must change and group interaction is inevitable. He has explained the purpose of this technique as follows:

The purpose of the business game is to reproduce the important aspects of reality, thus causing the candidates to display behaviors that are essentially like those they would display in a similar real-life situation. Since the game telescopes time, many of the behaviors that are not readily noticed in a real-life situation

become clearly evident in a simulated situation.¹

Jaffee describes his Garment Company problem as an example of a business game. A group of six candidates form a team. A buyer-supplier relationship is established. The team buys pieces of athletic uniforms from the supplier at set prices and then sells completed garments to the buyer at set prices. The team actually assembles the finished uniforms to set specifications with a stapler. A set amount of capital in play money is provided the team of candidates. The prices of materials and of finished goods change every ten minutes to give the game its dynamic character. The object of the game is to organize the team as a firm, buy raw materials, assemble the uniforms, and sell the uniforms in a way to maximize profits. In one period of the exercise, the price paid for finished uniforms fluctuates so that no firm quote exists.²

Another business game used in the Management Progress Study is described by Bray and Grant. It also is a manufacturing game where the participants manufacture toys for the Christmas trade. The candidates are required to buy

¹Ibid., p. 11.

²Ibid., pp. 23-39.

materials and sell finished goods under dynamic market conditions, carry out the manufacturing process, and additionally maintain inventories.¹

Two additional commonly used games are described by Byham and Thornton. The first is the Conglomerate Game where the teams of assessees trade shares of company stock to form conglomerates. The trading of shares takes place in three sessions. Their other example is the Keyboard Problem. This is another manufacturing exercise where the six candidates buy and sell keys used on the keyboards of consoles of computer products. A selection of keys is provided with varying profit margins. Each team must determine how to invest its funds, organize purchasing, control stock, and finally sell its product. During the problem bonus options occur which force a rearrangement of resource utilization.²

¹Douglas W. Bray and Donald L. Grant, "The Assessment Center in the Measurement of Potential For Business Management," Psychological Monographs: General and Applied, LXXX (No. 17, 1966), 5.

²William C. Byham and George C. Thornton, III, "Assessment Centers: A New Aid in Management Selection," Studies in Personnel Psychology, II (October, 1970), 25.

The Leaderless Group Discussion

Jaffee feels the leaderless group discussion

offers

an excellent opportunity for the evaluation of managerial or supervisory skills because it places people in a relatively unstructured situation in which they can demonstrate their skills by interacting with other people face-to-face.

As cited earlier, there are two types of leaderless group discussions--one where a role is assigned and the second where each participant formulates his own position. The former method insures that each participant has a different view to support, but it may place the participant into supporting, under pressure, a point of view different from his personal opinion. This may sacrifice some realism,¹ but it may also be a realistic requirement in many job situations. The latter method tends to have more realism. More than one candidate may assume the same role and as a result the quieter candidate(s) may remain silent and not display his (their) capabilities. If there is fairly general agreement, there may be little discussion

¹Jaffee, Effective Management Selection, pp. 12-3.

frustrating the whole assessment procedure. Jaffee feels the two types compliment each other.¹

The first of the two samples of the leaderless group discussion exercise presented by Jaffee is the Granite College problem. The candidates assume roles as members of the board of trustees of the college which is experiencing financial difficulties. Each assessee is assigned a feasible solution which he is to strongly support. All candidates are given identical information and are given twenty minutes to prepare information to support their cause. They then persuasively present their assigned view in a five minute oral presentation. After this phase, the group acts as the board of trustees to determine the best solution. Each assessee is still expected to sell his designated opinion. The six alternatives include raising tuition, investing in a somewhat risky business venture, using fewer instructors and closed circuit television, increasing enrollment by lowering admission standards, retaining the status quo and hoping the problem will solve itself with time, and expanding athletic facilities.²

¹Ibid.

²Ibid., pp. 46-59.

Jaffee's second leaderless group discussion is of the second type where each candidate must determine his own position. He labels it the Goals exercise. Each assessee must list each of ten occupations in order of popular desirability. The occupations given are architect, farmer, attorney, chef, physician, teacher, salesman, judge, accountant and businessman. After each assessee has done this, the group must develop a single ranking of these occupations.¹

Three other typical group discussion problems described by Byham and Thornton are determining proper disciplinary action to take in specified cases, determining which of several subordinates should be promoted, and deciding among alternative courses of action to expand a business.² The promotion exercise was used in the Management Progress Study.³

Byham, in his Harvard Business Review article, suggests that the promotion exercise is more adaptable to lower level candidates. He suggests a school board

¹Ibid., pp. 66-7.

²Byham and Thornton, "Assessment Centers: A New Aid," 25.

³Bray and Grant, "Assessment Center Measurement of Potential," 5.

problem for higher level candidates. The school board has received a \$100,000.00 bequest that it must allocate. Each assessee is assigned a position to advocate as to method of expenditure. Unlike the other exercises set forth above, the funds can be allocated to one project or to any combination of the various projects. The assigned points of view are weakly defined allowing opportunity for development of arguments in a creative fashion.¹

Frank DiCostanza and Thomas Andretta of the Internal Revenue Service report an exercise similar to the promotion exercise, but with a touch of organizational realism inserted. Each of the assessees are given a home office supervisor to represent in the "supervisor of the year" competition. The group's task is to select the one individual to be awarded the IRS honor.²

In-basket Problem

A supervisor has two major functions--dealing with people in face-to-face relationships and processing paperwork. The previous exercises have dealt with the

¹Byham, "Assessment Centers For Spotting Future Managers," 157.

²DiCostanza and Andretta, "Assessment Center in the IRS," 13.

former aspect; the in-basket problem deals with the latter. The problem consists of documents representing problems that a supervisor may find in his in-basket at the start of a day. The candidates, working alone, are to determine what action should be taken with every item. The way in which an assessee handles the items gives some indication of how he perceives priority and can intermesh a myriad of items into a meaningful whole. The interview conducted upon completion of action determination provides evidence as to how well the candidate is able to orally communicate, support, and defend his various decisions.¹

In Jaffee's sample problem, the candidate assumes the role of Harry Jones who has unexpectedly become division superintendent of a manufacturing firm due to his predecessor's untimely death from a heart attack. The day is Sunday and in one hour Harry Jones must leave town for an important meeting pertaining to his previous job. Fourteen items are in the in-basket which must be attended to. Mr. Jones will not return to his office until Wednesday. As it is Sunday, the files are all locked, the switchboard closed, and Jones has no access to either. Problems arise

¹Jaffee, Effective Management Selection, p. 13.

such as Jones' secretary wanting to take her planned annual vacation starting Wednesday, reports of unsatisfactory work, indications of an unsatisfactory supervisor recommended for promotion, a letter from the town mayor on an employee's disreputable character, and indications of Jones' predecessor's weak performance. The real problems are not spelled out, but require a correlation of documents. Some documents are incomplete and others require no immediate action.¹

The various in-basket problems are basically the same differing in size and time allotted. All emphasize a supervisor or manager who is thrust into a problem with no immediate help available to lean upon. Sears Roebuck is the only organization which attempts to objectively score the test. Other firms use it as a stimulus for the in-basket interview.²

Other Exercises

Many assessment center programs call for the candidate to make an individual presentation. While Jaffee's program did not call for it as such, it appears

¹Ibid., pp. 74-90.

²Byham and Thornton, "Assessment Centers: A New Aid," 24.

as a portion of the Granite College exercise. These presentations normally last from five to ten minutes. The subject matter varies with possibilities of a synopsis of a Harvard Business Review article, a financial data presentation, or a design of a management development program.¹ Another exercise, recommended by Byham, is a recommendation for future expansion of part of a product line. This exercise is derived from an examination of financial and marketing data.²

Another exercise is the mock employment interview. This situation gives each applicant a chance to display his ability in this technique to which many managers and supervisors devote much time. The applicant is often a specially trained individual for this task.³

J. C. Penney uses what they label the "Irate Customer Phone Call." After the first day of activities, the participants are told to play the role of a store manager while preparing for the next day. During this 8:00 to 10:00 P.M. period, the phone call is made. The

¹Ibid., 25.

²Byham, "Assessment Centers For Spotting Future Managers," 163.

³Byham and Thornton, "Assessment Centers: A New Aid," 25.

call, from an assessor, lodges a complaint and then makes several unreasonable demands on the manager. The assessee's ability to handle this problem is rated.¹

Exercise Evaluation

As mentioned above, only Sears Roebuck attempts to objectively grade the in-basket problem. Most of the problems are devised to provide insight into the individual's negative traits of business management; but, the basic purpose of the exercises is to act as a stimulus to evoke behavior to be observed. There is a list of from maybe ten to thirty-five behavior traits. The list remains the same in each exercise even though differing exercises emphasize different traits. The differing scores on the several exercises are combined at the final evaluation to form the overall assessment report.

Jaffee recommends scoring on a five point scale like the one set forth below which was used at General Electric:

- A. Individual Work Characteristics
 - 1. General Activity Level
 - 2. Thoroughness: Inner Work Standards

¹Ibid., 25-6.

- 3. Adaptability
- 4. Self-evaluation
- B. Decision-Making Style
 - 1. Preparation
 - 2. Rapidity
 - 3. Time perspective
 - 4. Degree of commitment
- C. Organization and Planning Style
 - 1. Problem analysis
 - 2. Planning and organizing
- D. Leadership Behavior
 - 1. Reaction from others
 - 2. Motivation to lead
 - 3. Delegation
 - 4. Style of leading
 - 5. Effectiveness
 - 6. Forcefulness
- E. Interpersonal Characteristics
 - 1. Overall manner and appearance
 - 2. Attitude toward peers
 - 3. Attitude toward superiors
 - 4. Attitude toward subordinates
 - 5. Amount of group activity
 - 6. Written communication
 - 7. Oral communication
 - 8. Reaction to conflict
 - 9. Emotional behavior.¹

The Management Progress Study rated twenty-five similar items of a five-point scale:

- 1. Organization and Planning
- 2. Decision making
- 3. Creativity
- 4. Human relations skills
- 5. Behavior flexibility
- 6. Personal impact
- 7. Tolerance to uncertainty
- 8. Resistance to stress
- 9. Scholastic aptitude
- 10. Range of interests
- 11. Inner work standards

¹Jaffee, Effective Management Selection, pp. 17-20.

12. Primacy of work
13. Oral communications skills
14. Perception of social cues
15. Self-objectivity
16. Energy
17. Realism of expectations
18. Bell system value orientation
19. Social objectivity
20. Need advancement
21. Ability to delay gratification
22. Need for superior approval
23. Need for peer approval
24. Goal flexibility¹
25. Need for security.

It has been recommended by some that a four-point scale be used to force assessors to make a decision and avoid fence-straddling.

Assessor Evaluation Reports

At the conclusion of the assessment activities, an overall rating (OAR) is established for each candidate. Wollowick and McNamara of IBM describe a five-point scale which indicates: "(a) exceptional potential for advancement, (b) above-average potential for advancement, (c) average potential, (d) below-average potential, and (e) no potential."² Campbell and Bray suggest three categories: "acceptable for

¹Bray and Grant, "Assessment Center Measurement of Potential," 25.

²Herbert B. Wollowick and W. J. McNamara, "Relationship of the Components of an Assessment Center to Management Success," Journal of Applied Psychology, LIII (October, 1969), 349.

promotion now, questionable, and not acceptable now and unlikely to become acceptable."¹ The AT & T salesmen selection program used four categories: "More than acceptable, acceptable, less than acceptable and unacceptable."²

Additionally, a written report is generated which puts into words the assessors' feelings about a certain candidate. These tend to indicate where a person was strong in the various exercises and where he was weak. They may indicate weaknesses in setting priorities, a disorganization in personal presentation, a strength in perception of interpersonal relations or a strength in intellectual ability. These written reports can provide the best feedback to the individual for strength and weakness recognition purposes, and provide the best

¹Richard J. Campbell and Douglas W. Bray, "Assessment Centers: An Aid in Management Selection," Personnel Administration, XXX (March-April, 1967), 7.

²Douglas W. Bray and Richard J. Campbell, "Selection of Salesmen by Means of an Assessment Center," Journal of Applied Psychology, LII (1968), 38.

indicator of where management development efforts should be concentrated.¹

4 Applicant Selection

One of the justifications for assessment center use is based upon the recognized inadequacies of personnel systems dependent upon the supervisors' recommendation for selection. One of the philosophical weaknesses of present assessment center applications is that many rely upon the supervisors' recommendations for determining the pool of candidates to be assessed. Byham reports that some companies are using self-nomination to alleviate this weakness. IBM is investigating the feasibility of using tests to select assessment candidates.² Cost seems to preclude mass

¹Several excellent examples of the individual written assessment reports are available, but are too lengthy to include in this paper. Such examples can be found in William C. Byham, "Assessment Centers For Spotting Future Managers," Harvard Business Review, XLVIII (July-August, 1970), 163-7; Cabot L. Jaffee, Effective Management Selection (Reading, Massachusetts: Addison-Wesley Publishing Company, 1971), pp. 104-8; William C. Byham, "The Assessment Center as an Aid in Management Development," Training and Development Journal, XXV (December, 1971), 20-1; and Douglas W. Bray, "The Assessment Center Method of Appraising Management Potential," in The Personnel Job in a Changing World, ed. by Jerome W. Blood (New York: American Management Association, 1964), pp. 228-31.

²Byham, "The Assessment Center as an Aid," 16.

assessment. The Wollowick and McNamara study utilized individuals "designated as having above-average potential for advancement."¹ The Union Carbide Oak Ridge study used candidates recommended by front-line supervisors who "exhibited a high degree of technical (job) proficiency and who indicate supervisory potential." These recommendations further required department head concurrence, an indication of the candidate's willingness to be assessed, and a favorable formal screening of personnel records.² Sears Roebuck assesses management trainees as part of a formal training program.³ The TVA program, which was abandoned for budgetary limitations⁴ utilized candidates who had volunteered and who, by virtue of present positions, might be considered for promotion to management positions.⁵

¹Wollowick and McNamara, "Relationship of the Components," 348.

²Bender, Calvert and Jaffee, Report on Supervisor Selection, pp. 13-5.

³V. Jon Bentz, "Validity of Sears Assessment Center Procedures" (paper presented at Symposium: Validity of Assessment Centers, American Psychological Association, Washington, D. C., September 5, 1971), p. 4.

⁴Infra, p. 82.

⁵Tennessee Valley Authority, "Study-Managerial Skills Appraisal Program," Knoxville, Tennessee, 1967, p. 3. (Mimeographed.)

As can be seen, almost without exception, the candidate's supervisors are essential in initiating an individual's assessment center participation. This situation may be made more meaningful when looking at Harvey A. Thomson's comparison of supervisor's ratings to assessment results. He concludes that supervisor's ratings are more lenient, of a more restricted range, and "of a poorer quality than the predictor ratings."¹

5 Assessor Selection and Training

As can be inferred from the above discussion, the assessor is an extremely important part of the assessment process and firms are immensely interested in assessor quality and training.

Selection of Assessors

Byham states that assessors are normally line managers two or three levels above the assessees. Normally, an assessor is trained and assigned to a pool of assessors. He is drawn from the pool to perform as an assessor once or twice a year. The practice of AT & T

¹Harvey A. Thomson, "Comparison of Predictor and Criterion Judgments of Managerial Performance Using the Multitrait-Multimethod Approach," Journal of Applied Psychology, LIV (December, 1970), 499.

is an exception, where assessors are assigned for a six-month period. The advantage of a shorter period is that better qualified individuals can be recruited as assessors and the side benefits, to be discussed later,¹ are more widespread. Training costs, however, are greater. The longer assignment allows for a more rigorous and lengthy training period. It may, however, cause assessment to become a routine matter which Byham feels should not happen.² Byham cites the following advantages of using line managers:

1. They are familiar with the jobs for which the participant is being assessed and can therefore judge the participant's aptitude
2. Participation as an assessor is a developmental experience
3. The involvement of line management greatly increases the acceptance of the program by other managers and by the participants themselves
4. Exposure as an assessor increases familiarity with the program,³ assuring most effective use of the results.

Consideration has been given to the use of psychologists as assessors since they are more familiar with behavior patterns and are trained to be observers

¹Infra, p. 90.

²Byham, "Assessment Centers For Spotting Future Managers," 156-7.

³Byham, "The Assessment Center as an Aid," 13.

of behavior. Greenwood and McNamara conducted a study on this matter and it was found that neither the professional nor non-professional evaluator gave participants consistently higher or lower ratings. The distribution of the scores were considered about equivalent and suggested the two categories were about equivalent. On the basis of these findings, they conclude that the selection of assessors need not be based upon extensive formal training or professional experience. They feel that an exception may exist in the evaluation of top executives where only independent professional evaluators could remain objective.¹

Thomson's study comparing the ratings of managers and psychologists with supervisors' evaluations comes up with similar findings. "There was no significant difference between the managers and psychologists with regard to the level of the means, standard deviations, or reliabilities of their ratings."²

A somewhat different conclusion may be reached in determining the type person to manage the assessment center program. Most all authorities agree that a psychologist is

¹John M. Greenwood and Walter J. McNamara, "Interrater Reliability in Situational Tests," Journal of Applied Psychology, LI (March, 1967), 105.

²Thomson, "Comparison of Predictor and Criterion Judgments," 499.

best qualified for this function. Byham feels that psychologists are particularly suited in:

1. Aiding managers to identify kinds of behavior that are critical to success.
2. Developing or selecting assessment center exercises to bring out these kinds of behavior in the candidates.
3. Training assessors.
4. Administering pilot programs.
5. Reviewing, critiquing, and improving the program.
6. Researching the program's effectiveness.¹

Furthermore, Byham feels they are useful in administering more sophisticated tests, handling feedback to participants, and aiding managerial assessors to summarize their observations.² AT & T is an exception in having a non-psychologist running their center. There is, however, no evidence that psychologists make better center administrators.³

Assessor Training

To give an idea of the size of the assessor training task, reference is made to Jaffee's proposed one-day center previously discussed. This center included about seven hours of exercises and an additional hour for lunch. His

¹Byham, "Assessment Centers For Spotting Future Managers," 159.

²Byham and Thornton, "Assessment Centers: A New Aid," 23.

³Byham, "Assessment Centers For Spotting Future Managers," 159.

recommendation for training assessors is a five-day session with seven working hours per day, or five times as much as the assessment procedure. Such a program, he suggests, will train twelve evaluators, if all are successful. His program spends the first day discussing the skills of an effective supervisor, and completing and discussing the in-basket problem. The second day is spent completing and discussing the Garment Company exercise and the Goals exercise. An hour is also devoted to a general program overview. The third day is devoted to completing and discussing the Granite College case, preparing for the dry run scheduled on the fourth day, and a general discussion on the evaluation of behavior. The fourth day is occupied with a dry run of the assessment center. The assessees are previously selected supervisors. The final day is spent in an evaluation of the dry run exercise. It goes pretty much without saying that such a program offers an excellent management development opportunity even if the company never assesses any candidates.¹

TVA reports thirty-five hours spent in training its evaluators. This training included (1) information on principles of this method of psychological skills evaluation,

¹Jaffee, Effective Management Selection, pp. 100-4.

(2) participation in the actual exercises, (3) preparing an evaluation report on the behaviors of his fellow evaluators and himself, and (4) serving as an assessor in a practice run of an assessment center.¹

Byham states that since a manager performs daily the skills he will evaluate in the assessment center, it could be argued that little training is necessary. However, he states that "companies report marked improvements in the reliability of supervisory rating after the supervisors have been trained to work as assessors."² He cites two common methods of assessor training. One is as an understudy or non-voting member of an actual assessor panel. The second is going through the entire assessment exercise less the evaluators. Some companies devote as little as an hour to training, while others devote several days.³ AT & T devotes one month to training its assessors.⁴

¹Tennessee Valley Authority, "Study-Managerial Skills Appraisal Program," p. 4.

²Byham, "Assessment Centers For Spotting Future Managers," 157.

³William C. Byham and Regina Pentecost, "The Assessment Center: Identifying Tomorrow's Managers," Personnel, XLVII (September-October, 1970), 25.

⁴Byham, "Assessment Centers For Spotting Future Managers," 157.

6 Applications of the Assessment Center

From the evidence above, it is clear that there are a varied number of applications of the assessment center principles. Most of the earlier applications of the assessment center were to identify first level supervisor potential, and this still tends to be the major use made of the assessment center technique. Recently efforts have been moving in the direction of establishing centers to identify middle management talent. J. C. Penney, Standard Oil of Ohio, International Business Machines, General Electric, and American Telephone and Telegraph, all have centers to identify first level supervisors and concentrates the major efforts here. However, all have developed centers for promotion and development of middle managers.¹

The Union Carbide Oak Ridge Gaseous Diffusion Plant,² Olin Corporation³ and the Internal Revenue Service⁴ all have

¹Byham and Pentecost, "The Assessment Center: Identifying Tomorrow's Managers," 22.

²Bender, Calvert and Jaffee, Report on Supervisor Selection, p. 9.

³Stanley R. Acker and Michael R. Perlson, Can We Sharpen Our Management of Human Resources? (Stanford, Connecticut: Olin Corporation, 1970), p. 6.

⁴DiCostanza and Andretta, "Assessment Center in the IRS," 12.

centers to identify first level supervisory talent. AT & T has a center to identify salesmen or communications consultants.¹ Another new use of the assessment center technique is in selecting new managerial personnel. Both Sears Roebuck and American Telephone and Telegraph Company have such centers.² Sears developed this concept in an effort to decrease an extremely high turnover rate among such new employees.

7 Feedback to Assesseees

Byham states that "one of the most important, yet most hazardous, aspects of assessment center operation is feeding the reports back to the candidates."³ There are a number of different ways to handle the problem. Some companies leave the option with the assessee. The finding of these firms is those candidates that do very well or very poorly know where they stand. The remainder are particularly desirous of the information in order that

¹Bray and Campbell, "Selection of Salesmen," 36.

²Byham and Pentecost, "The Assessment Center: Identifying Tomorrow's Managers," 22.

³Byham, "Assessment Centers For Spotting Future Managers," 158.

they may improve themselves. Some companies automatically provide feedback.¹

Communication of assessment center results is normally from the point of view of self-development. The assessee is made aware of the impact he has upon others and the adequacy of his performance in the various exercises. This information is presented in anticipation of developing a plan whereby the assessee can overcome his deficiencies. In some cases, assesseees must wait a considerable period of time for feedback. Byham emphasizes, the sooner the feedback is received, the better it communicates the recommendations. If a psychologist is available, he normally will have the task of discussing assessment results.²

There are some reports of increased turnover among poor performers after assessment experience. Other studies have reported no change. This increase may be regarded as an elimination of "deadwood" to some extent. It could represent a potential problem, however, if the firm is dependent upon the knowledge and experience of these persons.

¹Ibid.

²Byham and Pentecost, "The Assessment Center: Identifying Tomorrow's Managers," 27.

The type of feedback given and its method of presentation can have an effect on the degree of this occurrence.¹

The Autolite Division of Ford Motor Company lets assessees view their performance by means of videotape. After they have completed their in-basket problem for assessment purposes, the candidates form small groups to share and evaluate their decisions. This then becomes a developmental exercise where the assessees broaden their views on responses to various situations.² Byham cites evidence that even without feedback, considerable insight to oneself is gained just through participation.³

A somewhat different approach to feedback has been used at Union Carbide's Oak Ridge Gaseous Diffusion Plant. Feedback is provided to those who request it. The feedback is provided in a constructive manner by the assessee's line organization, normally by the department head who previously conducted a preassessment interview. If the candidate is not satisfied with his feedback, he can request further information from the program coordinator. The candidate can read

¹Ibid.

²Byham, "The Assessment Center as an Aid," 12.

³Ibid.

his complete overall evaluation report. The recommending supervisor is also briefed on the performance of the candidate.¹

8 Assessment Center Applications in the Smaller Company

The examples of assessment center use above have all been with relatively large firms. Byham cites a common, but erroneous, belief that a firm "must have 10,000 or more employees to use assessment centers." He states that he has seen several effective operations in smaller companies. Several suggestions are offered toward keeping costs within the reach of the smaller firm. A center can be operated in existing company facilities. It can be run during the workday to cut overtime costs or, to avoid disrupting work, it could be split into separate days, or Saturday, and Sunday might be considered. The time requirement can be shortened by completing forms prior to the center's commencement. Similarly, the in-basket problem could be completed in advance. Interviews can be scheduled at the convenience of both parties outside of the center's hours. It may be possible to combine the

¹ Cabot Jaffee, Joe Bender and O. Lynn Calvert, "The Assessment Center Technique: A Validation Study," Management of Personnel Quarterly, IX (Fall, 1970), 10.

assessment center into an existing training program.¹ It is apparent that there are many ways an acceptable arrangement can be worked out.

John H. McConnell reports on a smaller assessment center developed by Wolverine Tube. Starting in May, 1967, they developed a list of sixteen characteristics necessary for their managers. They operated their first center in April, 1968. It was a ten-hour program which included some paper-and-pencil type tests and two leaderless group discussions. After the trial period, it was decided that the simulation exercises were more meaningful than the pencil-and-paper tests, so greater effort was placed in development of these exercises. Centers are now operated at all four Wolverine plants. The centers operate once a quarter. Managers act as assessors for three successive quarters on a staggered schedule. Evaluation of the success of the center is still underway, but preliminary data indicate these centers "compare favorably with those resulting from the longer, more sophisticated versions at other companies."²

¹Byham, "Assessment Centers For Spotting Future Managers," 160.

²John H. McConnell, "The Assessment Center in the Smaller Company," Personnel, XLVI (March-April, 1969), 40-6.

CHAPTER V

VALIDITIES AND SUCCESSES OF THE ASSESSMENT CENTER

The Management Progress Study

The Management Progress Study of American Telephone and Telegraph is a unique contribution to research on the validity of assessment centers. It is one of two reported studies, with valid results, in which these results were not contaminated by the managerial use of assessment center data.¹

According to Douglas W. Bray of AT & T:

The Management Progress Study--a longitudinal study of the young business man--was initiated by the Bell System in 1956...to learn more... about the characteristics and growth of man as they become, or try to become, the middle and upper managers of a large concern.

It includes both college graduates and vocational employees who early in their careers advanced to lower management.

The study "was instituted as a long term study without

¹Byham and Thornton, "Assessment Centers: A New Aid," 27.

expectation of immediate practical results." The study led to "significant changes in certain personnel practices" at AT & T.¹

The assessees were a sample of 422 men of whom 148 were not college graduates at the time of employment and 207 were college graduates. As the assessment procedures were revised during the study, 67 of the college graduates were eliminated from the 422 number in the analyses. The objective of the assessment was to predict the likelihood of the assessees progressing to middle management within ten years.² In 1965, results were tabulated ahead of schedule. The observation period was eight or less years as the assessments occurred from 1956 to 1960 which is less than the planned ten years. At the end of this time, progression had occurred to the levels indicated in Table 1. The college graduates progressed more rapidly, but not unexpectedly so, as almost all were recruited as having middle management potential.³

¹Douglas W. Bray, "The Management Progress Study," American Psychologist, XIX (1964), 419-20.

²Bray and Grant, "Assessment Center Measurement of Potential," 6.

³Ibid., 16-7.

TABLE 1

PROGRESS IN MANAGEMENT BY LEVEL

Education Background	Number	Percent at Management Level		
		3-4	2	1
College	125	30	64	6
Non-college	144	13	42	45
Both	269	21	52	27

Source: Bray and Grant, "Assessment Center Measurement of Potential," Table 11, p. 16.

Table 2 shows the relationship of levels of achievement to the assessment staff predictions. As Table 2 shows, the percentage of those who were predicted to achieve middle management (level 3-4), who actually achieved it, is far greater than among those who were not so predicted. The converse is also apparent. Bray and Grant provide the following analysis:

Of the 55 men achieving middle management, 43 (78%) were predicted correctly by the assessors. In contrast, of the 73 men who have not advanced beyond the first level of management, the assessment staffs predicted that 69 (95%) would not reach middle management within 10 years.¹

It is reported the results are even more clear cut after ten years.² For correlation purposes, salary was considered more discriminating. Seven samples were studied with a correlation of "salary progress range from .38 to .84 with a median r of .71."³

¹Ibid., 17-8.

²George C. Thornton, III, "The Validity of Assessment Centers" (paper presented at Symposium: Assessment Centers: Multiple Assessment Procedures for Evaluating Managerial Personnel, Rocky Mountain Psychological Association, Denver, Colorado, May 14, 1971), p. 14.

³Bray and Grant, "Assessment Center Measurement of Potential," 18.

TABLE 2

ASSESSMENT PREDICTIONS VERSUS PROGRESS

Education Background	Assessment Prediction and Number	Percent to Management Level		
		3-4	2	1
College	Yes 62	48	50	2
	No or questionable 63	11	78	11
Non-college	Yes 41	32	61	7
	No or questionable 103	5	35	60
Combined	Yes 103	42	54	4
	No or questionable 166	7	51	42

Source: Bray and Grant, "Assessment Center Measurement of Potential," Table 12, p. 17.

Other Studies of Predictive Validity

The first study of the assessment process has been discussed above. Since its beginning in 1964, there have been a number of other applications of the method that have been studied to determine validity and have been subjected of a published report of findings. Several of these are discussed below to provide results of validity studies of the assessment center procedure.

AT & T Salesmen Study

The Management Progress Study was designed to assess ability of functioning as a supervisory line manager. In this study, prediction of ability as a salesman, or communications consultant, as AT & T labels them, was attempted. Assessment techniques were redefined from previous AT & T applications for this experiment. As with the above study, no feedback was provided, and no use was made of the assessment results, so another uncontaminated study resulted. The study assessed 142 men, but for analysis purposes this had to be reduced to 78 for various reasons.¹

¹Bray and Campbell, "Selection of Salesmen," 36-7.

Table 3 presents the staff predictions as a result of assessment center performance. Bray and Campbell feel these results, in themselves, are of interest as all seventy-eight assessees had previously been screened and found fully qualified for the job of a communications consultant.¹

Comparison of these results was made an average of six months after assessment based upon sales contacts. This rating was performed by a field-review team from AT & T headquarters. These teams were fully experienced and normally performed this function. Reviewers accompanied salesmen on as many sales visits as necessary to rate performance. The reviewers' ratings appear as Table 4. Comparisons were also made based upon supervisor's ratings and trainer's ratings, but these were found to be non-significant. Again the question of supervisor rating validity arises. Bray and Campbell conclude that "an assessment center staffed by sales managers instructed in assessment techniques can be a valuable aid in the selection of prospective salesmen."²

¹Ibid., 38.

²Ibid., 41.

TABLE 3

ASSESSMENT JUDGMENTS OF ACCEPTABILITY

Assessment Judgment	Number of Men	Percent of Group
More than acceptable	9	12
Acceptable	32	41
Less than acceptable	16	20
Unacceptable	21	27

Source: Bray and Campbell, "Selection of Salesmen,"
Table 1, p. 38.

TABLE 4

ASSESSMENT JUDGMENTS VERSUS FIELD RATINGS

Assessment Judgment	Number of Men	Number Meeting Review Standards	Percent Meeting Review Standards
More than acceptable	9	9	100
Acceptable	32	19	60
Less than acceptable	16	7	44
Unacceptable	21	2	10

Source: Bray and Campbell, "Selection of Salesmen,"
Table 2, p. 38.

AT & T 1967 Follow-up Study

In 1967, a follow-up study of Bell System assessment results was made. The study included 506 men from four Bell System companies which had programs in operation for several years. Five groups of men were studied. Three groups had been assessed and rated as either acceptable, questionable, or not acceptable. A fourth group was of men never assessed but who had been promoted after the beginning of the assessment program. The fifth group was of men who had been promoted before the program's beginning. A measure of performance was made from supervisor's written evaluations, the supervisor's evaluation in an interview, and a ranking of workers by the supervisors. A measure of potential was developed from the man's present level, his potential rating on his last formal evaluation and a ranking by the man's middle management supervisor.¹ The results are presented in Table 5 which presents the percentage of men in each category rated as above average performers and Table 6 which lists the percentage of assessed personnel rated to have high potential. Campbell and Bray consider the increase in above-average performers among those promoted from 55 per

¹Campbell and Bray, "Assessment Centers: An Aid in Management Selection," 9-11.

TABLE 5

MEN RATED "ABOVE AVERAGE" PERFORMERS

Assessment Rating	Percent Consistently Above Average Performers
Acceptable	68
Questionable	65
Not acceptable	46
Men Not Assessed	Percent Consistently Above Average Performers
Post-assessment promotion	63
Pre-assessment promotion	55

Source: Campbell and Bray, "Assessment Centers: An Aid in Management Selection," Figure 1, p. 10.

TABLE 6

MEN RATED AS HAVING HIGH POTENTIAL

Assessment Rating	Percentage of High Potential Men
Acceptable	50
Questionable	40
Not acceptable	31

Source: Campbell and Bray, "Assessment Centers:
An Aid in Management Selection," Figure
2, p. 12.

cent to 63 per cent "represents fairly substantial improvement."¹ Campbell and Bray conclude that "the assessment center method is a valuable technique for the identification of management potential."²

AT & T--Michigan Bell

A smaller, not quite as extensive, study was conducted at Michigan Bell Telephone Company. "It compared the first 40 men appointed to management after having gone through the Assessment Center with the last 40 appointed to management before the Assessment Center method was put into operation."³ Extensive reviews were made of the new foremen by their supervisors, and by his supervisor's superior. The study revealed that 62.5 per cent of the assessed group was doing better than satisfactory work, while only 35 per cent of the non-assessed group met this standard. On a measure of potential, 67.5 per cent of the assessed group indicated potential for at least the second level of management;

¹ Ibid., 10-11.

² Ibid., 12.

³ Douglas W. Bray, "The Assessment Center Method of Appraising Management Potential," in The Personnel Job in a Changing World, ed. by Jerome W. Blood (New York: American Management Association, 1964), pp. 233-4.

while only 35 per cent of the non-assessed group met these criteria.¹

AT & T Study 1971

A more recent review of the AT & T assessment procedures is reported by Joseph L. Moses.² This study evaluated 8,885 men on the progress made in promotion to higher levels. The assessment ratings of these assessees is presented in Table 7. The relationship of promotional progress and assessment rating is shown in Table 8. Personnel assessed in 1969 and 1970 are not included in this tabulation.

Moses states that

there is a highly significant relationship between assessment rating and progress ($\chi^2 = 1239$, $p < .001$). Individuals assessed as 'more than acceptable' are twice as likely to be promoted two or more times than individuals assessed as 'acceptable,' and are almost 10 times more likely to be promoted beyond an entry assignment than those rated not 'acceptable' [sic]."³

He, further, concludes that his study indicates "there is

¹Ibid.

²Joseph L. Moses, "Assessment Center Performance and Management Progress," (paper presented in a symposium at the 79th Annual Convention of the American Psychological Association, Washington, D. C., September, 1971), 1-12.

³Ibid., p. 4.

TABLE 7

DISTRIBUTION OF FINAL ASSESSMENT RATINGS

Assessment rating	Number	Per cent
More than acceptable	638	7.2
Acceptable	2,279	25.6
Questionable	2,902	32.7
Not acceptable	<u>3,066</u>	34.5
Total	8,885	

Source: Moses, "Assessment Center Performance and Management Progress," Table 1, p. 9.

TABLE 8

PROGRESS IN MANAGEMENT BY ASSESSMENT RATING

Assessment rating	Number	Number Receiving 2 or more Promotions	Per cent
More than acceptable	410	166	40.5
Acceptable	1,466	321	21.9
Questionable	1,910	220	11.5
Not acceptable	<u>2,157</u>	<u>91</u>	4.2
Total	5,943	798	

Source: Moses, "Assessment Center Performance and Management Progress," Table 2, p. 10.

a considerable relationship between performance at an assessment center and progress in management."¹

Union Carbide Oak Ridge Gaseous Diffusion Plant

At the time of the Oak Ridge study, sufficient assessed promotions had not been made to study all assessment categories. Therefore a comparison was made between thirteen persons promoted after assessment with thirteen promoted under previous methods. Superiors, and some randomly selected subordinates, were interviewed concerning performance and supervisory traits. Data on worker absences, grievances and infirmary visits indicate no differences between the two groups. It is felt this results from the short time the new assessed supervisors had spent on the job. An analysis of statements made about supervisors by superiors and subordinates in a positive and negative sense reveals that more positive statements were made about the experimental group than the control group. The control group tended to receive proportionately more negative statements from superiors than subordinates. Jaffee, Bender and Calvert state that "while no conclusions of a definite nature may be drawn, they are certainly

¹Ibid., p. 6.

indicative of a trend." They label the program an "apparent success to date."¹

Tennessee Valley Authority

The sample for the TVA study was small with only twenty-nine individuals. The study revealed "an extremely high correlation between supervisors' ratings and panel appraisal, the assumption could be made that supervisors are skilled in making 'managerial skills' judgments."²

William E. Black reports that

some at TVA feel the supervisors' ratings alone are adequate, and that this experiment proved supervisors are indeed best qualified to assess their employees' potential. This feeling, plus budget limitations, led to discontinuance of the program.

Black further added that the experimenters judged the program to be highly successful.³

Caterpillar Tractor Company

To date there has been only one reported study indicating that assessment produces less valid results

¹Jaffee, Bender and Calvert, "The Assessment Center Technique: A Validation Study," 12-4.

²Tennessee Valley Authority, "Study - Managerial Skills Appraisal Program," p. 1.

³William E. Black, Jr., Personal letter to William B. McCowan, dated December 10, 1971. Black is the Chief of the Planning and Analysis Branch of the Division of Personnel, Tennessee Valley Authority.

than normal selection procedures. This center was operated at Caterpillar Tractor Company. The study was based upon thirty-seven first line supervisors promoted via the assessment center who were compared with twenty-seven subjects promoted in Caterpillar's normal manner of interviews and a personnel file review.¹ The two criteria for the study were a behavior check list and a performance rating report. The results are listed in Table 9. The results were statistically significant and considered highly in favor of the traditional selection method.²

IBM Marketing

This study was based upon forty-seven college educated marketing employees. Some were newly appointed first-line managers; others were non-supervisory personnel who had been identified as having management potential. The study compared assessment center results with results obtained by experienced managers from personnel records, performance evaluations, and interviews with supervisors. The results seem to indicate both methods produce equal

¹Byham, "The Assessment Center as an Aid," 16.

²Thornton, "The Validity of Assessment Centers," Table 2.

TABLE 9

MEAN SCORES OF VALIDITY APPRAISALS

Validity Method	Assessed Group	Non-assessed Group
Behavior check list $\bar{X}$	181	195
Performance rating $\bar{X}$	84	89

Source: Thornton, "The Validity of Assessment Centers," Table 2, p. 16.

results. Hinrichs feels that the expense of the center might be questioned if a careful review of prior job history and accomplishment can be made. However, he feels the center may be useful if early identification of potential is desired before a complete job history can be developed.¹

Effect of Assessment Exercises on Overall Rating

As has been indicated above, the assessment center technique comes up with a single overall assessment rating of an assessee. It is generally agreed that the best assessment results include input from both assessment exercises and pencil-and-paper tests, i.e. intelligence tests, personality tests, and others. Most centers include both types of exercises during the assessment process. More thoughtful research raises the question as to which of these two different exercises provides the greatest part of the positive variance upon which the success of the assessment center rests.

Bray and Grant face this question by partialing out the mental ability measured by paper-and-pencil tests.

¹J. R. Hinrichs, "Comparison of 'Real Life' Assessments With Situational Exercises, Paper-and-Pencil Ability Tests, and Personality Inventories," Journal of Applied Psychology, LIII (1969), 426-31.

The reliable variance they cite as remaining is shown in Table 10 for four samples. Bray and Grant conclude that

in three of the four samples, reliable variance remains after partialing out test scores. The results thus indicate that the assessment process does contribute more than can be gained by the simple administration of paper-and-pencil ability measures.¹

The same question is faced by Moses in his analysis and report of 5,943 assessments. He approaches the problem by establishing "multiple correlations between assessment variables and final ratings, and multiple correlations between the final rating, assessment variables and management progress." These correlations are presented in Table 11.² Moses concludes that from comparing the variables with tests to those without "that for both the final rating and progress, the behavioral variables account for most of the variance."³

¹Bray and Grant, "Assessment Center Measurement of Potential," 20.

²Moses, "Assessment Center Performance and Management Progress," 5-6 and Table 4.

³Ibid.

TABLE 10

PARTIAL CORRELATIONS WITH SALARY PROGRESS

Method	Sample							
	A		B		C ₁		C ₂	
	r	Partial r	r	Partial r	r	Partial r	r	Partial r
Staff judgment	.48		.57		.51		.52	
		.32*		.39**		.29		.42**
Ability test	.38		.46		.51		.36	

* $p < .05$ that $r = .00$

** $p < .01$ that $r = .00$

Source: Bray and Grant, "Assessment Center Measurement of Potential," Table 14, p. 20.

TABLE 11

MULTIPLE CORRELATIONS

Final Rating	R
All assessment variables	.824
Behavioral assessment variables	.816
Progress	R
All assessment variables	.463
Behavioral assessment variables	.461

Source: Moses, "Assessment Center Performance and Management Progress," Table 4, p. 12.

Additional Benefits of the Assessment Center

The operation of an assessment center provides additional benefits--other than the goals of assessment. Byham reports several. The most obvious perhaps is that of candidate training. The assessee cannot help but learn something of himself and others, and their interactions, as he progresses through the group discussions, business games and in-basket problems. These exercises, after all, were developed for training purposes long before they were used in the assessment center.¹

Being processed through an assessment center has a positive influence on the candidate's morale and job expectations. The assessees feel they have a fair chance to display their abilities. From participating in the various exercises, the candidates get an idea of what are the job requirements of higher positions. Byham reports that some candidates have withdrawn from promotion competition after seeing the volume of paperwork of a manager through the in-basket exercise.²

¹ Byham, "Assessment Centers For Spotting Future Managers," 154.

² Ibid., 154-5.

If the exercises are properly designed, it is possible to subtly adjust the candidates' attitudes and understanding. Byham reports of a company that had a problem getting service technicians to work overtime hours. Through their routine assessment program, the assessees were led to the conclusion that there are times when management has no alternative but to increase overtime for the present staff. Technicians gained sympathy for this problem by participating in the exercise.¹

Perhaps the most valuable added dividend is that of assessor training. Previous inference to this was made in describing Jaffee's recommended assessor training.² The training of assessors is basically a management training program. Byham feels an even more important experience is that of being an assessor. It is not often that managers have an opportunity to spend significant time observing behavior without interruptions. At General Electric the program directors feel so strongly on this point that they have established a one to one assessee-assessor ratio. Almost all of the experience is directly transferable to

¹Ibid., 155.

²Supra, pp. 56-7.

the manager's job. Byham concludes that a firm weakens itself by relying on outside psychologists, or psychological testing alone. "Serving as an assessor strengthens management skills...[and] forces a company to...resolve issues of job goals..., things companies ought to do but frequently do not."¹

Above it was mentioned that most of the assessor training is transferable to the manager's job. An area where great impact has been seen is in performance appraisal. Reports have been received of a more accurate appraisal system resulting and also a loss of fear by managers of the appraisal interview. These benefits are attributed to the experience gained through the assessor functions.²

Further benefits have been gained in the management development area. Eastman Kodak has developed a pre-foreman training program based upon the results of its assessment experience. J. C. Penney's experience in assessing candidates for a product service center manager resulted in an entirely new development plan. Finding that its technically trained people were lacking in management potential, they developed

¹Ibid.

²Byham, "The Assessment Center as an Aid," 12.

a program to give proven management personnel technical training.¹

Problem Areas

As might be expected with any program with the complexities set forth herein, there are problems, or negative effects, which must be confronted. The two greatest problems other than cost, which is the subject of the next section, are the effects upon people not being chosen for assessment, and the effects on those that do poorly.

Byham and Thornton report that in some organizations, the assessment center achieves the status of a management development program. "Just as the young executive may feel he must go through T-group or Grid training, he feels he must be assessed."² This feeling intensifies if promotions are based on assessment results. As James Anderson of Ford's Autolite Division puts it, a candidate may end up thinking, "My God, my whole career

¹Ibid., 11-2.

²Byham and Thornton, "Assessment Centers: A New Aid," 30.

is being decided on what I do in the next three days in a goldfish bowl."¹

A negative effect may result to people who do poorly at the center, even if they show the traits required in their current job. It is possible that increased turnover may result. As pointed out earlier in this paper, this could be viewed as cleaning out "deadwood", but it can be costly if the company is dependent upon the technical skills and competence of these people in their present positions.² As stated earlier, the solution to this problem may lie in the manner in which feedback is presented to the assessee.³

A further problem discussed earlier was the method of a person's nomination to be assessed. The problem of supervisor's ratings may just move itself to a different level.

A criticism of the assessment center from some authorities has been that it tends to breed conformity or

¹"Where they make believe they're the boss," Business Week, August 28, 1971, p. 24.

²Supra, pp. 61-2.

³Byham and Thornton, "Assessment Centers: A New Aid," 30.

"mirror images of the assessors." A study conducted at IBM by W. E. Dodd and A. I. Kraut found that "participants of Assessment Centers were more ascendant and less conforming ...when compared with those not selected to attend." A truly conclusive answer lies only in long range studies.¹

Cost of an Assessment Center Program

The cost of an assessment center program was briefly mentioned above as a problem. There can be little doubt from the intent, conduct, complexities, and methods of operating the above described programs, that they are expensive. It was noted that a major factor of adapting the system to the smaller company was in cutting the cost. Costs reported by several companies are set forth below.

Byham cites organizations have reported costs ranging from \$5.00 to \$500.00 per assessee. He feels these figures are misleading as some include assessor's time, participant's time and administrator's time, while others do not. He feels a program conducted on company premises may cost as little as \$50.00, while one conducted at a resort can run up to \$3000.00 for assessing twelve

¹Ibid., 31.

individuals. Commercially procurable assessment exercises cost from \$100.00 to \$200.00 for six candidates with a one time investment of \$100.00 for reusable supplies. The cost of starting a center can vary greatly dependent upon the use of the material presently available, the formal training of an administrator through outside means, and the hiring of a consultant.¹

Wolverine Tube estimates "the cost of assessing 12 men is equivalent to 12 lunches." AT & T with the use of its regional centers, including transportation and lodging, as well as assessee and assessor salaries, estimates costs at \$500.00 per candidate. IBM sets centers up in motels and estimates the cost of assessing twelve candidates, exclusive of staff salary, at about \$5000.00.²

TVA has set forth their costs in detail. Consulting costs have run \$2,475.00 which included "situation" materials, evaluation materials and counseling. These expenses, if amortized, would lower the per employee cost. Initial reproduction costs were \$535.00, but TVA reports an inventory of materials for 150 candidates. They employed

¹Byham, "The Assessment Center as an Aid," 17-8.

²Byham, "Assessment Centers For Spotting Future Managers," 159-60.

a graduate student for one summer to assist in program administration for \$1,200.00. Man hour costs for evaluators is two full days per session, and for candidates, one full day plus thirty to sixty minutes for feedback. They estimate a per candidate cost of about \$400.00.¹

The Internal Revenue Service cites a total cost of \$39,300.00 or about \$275.00 per candidate.²

The Union Carbide Gaseous Diffusion Plant report set forth costs in man hours. They have conducted ten panels, assessed sixty people and promoted nineteen of these. They state that "each panel session involves in excess of 160 hours of key managers' and candidates' time." It is concluded the program is "well worth the expenditure."³

Richard Jost of National Cash Register budgets \$500.00 to \$600.00 per man for assessment purposes. He states this exceeds the cost of moving a man if a mistake

¹Tennessee Valley Authority, "Study-Managerial Skills Appraisal Program," 7.

²DiCostanza and Andretta, "Assessment Center in the IRS," 15.

³Bender, Calvert and Jaffee, "Report on Supervisor Selection," p. 35.

is made by four times. A commercially available package of Jaffee's program is sold for \$295.00. The American Management Association offers a program to train twenty-four assessees, five assessors and two program chairmen for \$5,500.00.¹

These costs may be higher if looked at in a different light. Not all candidates are promoted. The center's aim is to identify potentially successful candidates for promotion. Present data indicate that one-third to one-half of the candidates are promoted. In this light, cost per successful, or promoted, candidate may be double, or treble, the per man figures cited.

Jaffee concludes that "when one compares this cost with the loss of money involved in promoting an unqualified person to a first-line supervisor's job, it becomes small indeed."²

Future Directions

The future directions of the assessment center approach seem to be indicated by the changing times and

¹Sloane, "Exercises Simulate Business Situations," p. 8.

²Jaffee, Effective Management Selection, pp. 7-8.

and changing needs. Recent articles tend to indicate three such directions as discussed below:

1. Equal Employment Opportunity Commission Guidelines

The Supreme Court's opinion on the Griggs et al. v. Duke Power case affirmed guidelines on employee selection and promotion procedures. Organizations must be able to prove that standards for appraisal and selection are related to job requirements. As the assessment center is such a method, it must meet this test.¹

Byham feels the content of assessment centers can be shown to be job related if "the center's dimensions resulted from an accurate and complete job analysis and to the extent that the exercises and procedures used accurately measured the dimensions." The assessment center problems are as much job related as a typing test. Particular care must be taken to bring out desired dimensions, however.²

Jaffee feels the assessment center may be a method to avoid discrimination charges that may arise from

¹Byham, "The Assessment Center as an Aid," 13.

²Ibid., 13-4.

pencil-and-paper tests. A Labor Department experiment tested 250 blacks and Indians through conventional written tests, and assessment procedures. Promotion potential showed up in 15 per cent through the conventional test, while it showed up in 50 per cent through the assessment center procedures. He feels the procedure may get a boost from the Supreme Court ruling.¹

The currency of this problem is further shown by its discussion at the 43rd Annual Personnel Conference of the American Management Association in February, 1972.²

2. Opportunities For Women

Douglas Bray feels the assessment center may offer a method of determining potential in women to perform in jobs previously occupied only by men. He indicates the need for accurate selection so as not to create a setback in the program. The center is used for this purpose within the Bell System. It is used to identify first-line managers, with at least second-line potential, in departments with

¹"Where they make believe they're the boss," Business Week, August 28, 1971, p. 25.

²American Management Association, brochure announcement of dates and schedule of the 43rd Annual Personnel Conference in Chicago on February 9-11, 1972.

employee surpluses. These employees can be moved to departments with a shortage of second-level managers. The problem is further complicated since women are often hired into jobs where there is not a high degree of promotability and where their talents often go unrecognized. To alleviate this problem, Bray feels an assessment center form of early identification may be useful.¹

3. Management Development

Throughout the discussion on the assessment center, there are seen many instances where management development efforts can be applied. It is possible for a firm to develop an inventory of management skills displayed in assessed personnel. Likewise, the opposite approach can be taken to achieve a listing of management skill deficiencies. With such knowledge, development programs may focus on such an area to alleviate the problem. A development plan can be suggested for each assessed employee. In Byham's Training and Development Journal article, there are indications that steps in this direction are occurring. Such uses at Eastman Kodak and J. C. Penney in this area

¹Douglas W. Bray, "The Assessment Center: Opportunities For Women," Personnel, XLVIII (September-October, 1971), 30-4.

have been cited earlier.¹ Byham feels many management development techniques have previously failed for lack of success in light of empirical research. He feels that there is a need for more research, but present indications are that the assessment center works. It is a technique that "should be added to the repertory of tools available to the management development practitioner."²

¹Supra, pp. 91-2.

²Byham, "The Assessment Center as an Aid," 11-8.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Summary

In Chapters I and II of this paper the question of managerial incompetence was raised. Indications of its existence were given in Laurence J. Peter and Raymond Hull's book, The Peter Principle. Peter's theory is that incompetence results from people being promoted to higher levels as a result of competent past performance. He feels each person has a maxima of competency, and when a job requires performance above this level, incompetence enters the picture. The theories of management obsolescence were found to be broader and more applicable. They provided for a person becoming obsolete for several reasons other than promotion, even while remaining in his present position but not developing as fast as job requirements changed. Additional research in this area might even indicate obsolescence as a result of a

deterioration of abilities due to boredom or insufficient challenge while job requirements remain at a constant level. The size of the problem might be indicated by a Dun and Bradstreet study in 1966 which revealed that 91 per cent of all business failures were a result of management incompetence.¹ Several methods of reducing a firm's exposure to this problem were discussed. The methods of personnel selection and promotion were examined in further detail.

In Chapter III, several of the more popular methods of personnel selection and identification were examined including personal preference, psychological testing for aptitude, personality and intelligence, interviewing, the behavioral approach, and selection by objectives. All have received comments both pro and con. Recently two problems have been identified which have pushed some organizations towards new areas of selection. First, enough good managers were not available within organizations. Secondly, the equal opportunity laws of 1967, 1970 and the Griggs v. Duke Power decision have placed particular

¹J. Fred Weston and Eugene F. Brigham, Managerial Finance (3rd ed.; New York: Holt, Rinehart and Winston, 1969), pp. 727-8.

focus on selection and identification. A final method of selection by situational or simulation exercises was evaluated as an alternative which could potentially overcome the above stated problems. These exercises are used in the assessment center techniques discussed in the remainder of this study.

In Chapter IV, the history, procedures, and applications of the assessment center were examined. American Telephone and Telegraph pioneered in the industrial applications and research of the assessment center method and technique. Their first effort in 1956 was purely for research purposes. In 1958, they made the first operational industrial application.

It was determined that there is no one formal format which the assessment technique follows any more than there is a common set of exercises used by all organizations. Each firm develops its own set of exercises to elicit the behavior patterns it feels necessary in the management positions under consideration. Possible schedules for one, two and three day sessions were presented to give an indication of program content and variety. Through these, the four common assessment exercises of in-basket problems, leaderless group

discussions, business games and individual presentations were introduced. Each was studied in detail to provide an indication of the varied behavioral traits elicited and assessed. The problem of feedback was considered from the viewpoint of its dangers of possibly creating employee dissatisfaction, and its necessity of advising the employee of his strengths and weaknesses.

Review of the applications of the assessment technique revealed early applications were designed to identify first-level managers or supervisors. Since this time, it has been applied to the selection of middle managers and for screening employees prior to hiring with apparently successful results. It is presently being used in applications of early identification of employee potential and in management development and personnel planning efforts. Further use of the center has been found in identifying employees that would, for one reason or another, not fare well under conventional testing methods. Its efforts are expected to meet the scrutiny of equal opportunity legislation.

The reported validities of the assessment center methods were examined in Chapter V. The first published results were from the Michigan Bell 1958 study where it

was concluded that the method was about twice as successful at predicting managers who will succeed as were conventional methods. The Management Progress Study was intended to proceed for a ten year period before evaluation and publication of results. However, due to the demand for assessment validity data, the results were published early, in 1965. This study indicated that the assessment technique was a valid indication of management potential and prediction of future progress, both when compared with future salary levels, and future management levels. Since this time, there have been twenty-two research studies published in attempts to validate assessment center applications.¹ A number of these were reviewed. Only one study at Caterpillar Tractor reported negative findings; namely that the assessment center was not as successful at predicting management potential as conventional techniques. All other studies have deemed the center at least as successful as conventional selection procedures; many have considered it more successful.

Further discussion considered additional benefits of the assessment technique of both assessee and assessor

¹Byham, "The Assessment Center as an Aid," 14.

training and development. It was revealed that the center can be used to gain employee recognition of managerial problems. Also, indications were provided where companies have redesigned management development efforts based upon the results of assessment experience. Problems encountered in the assessment process were further studied. These included its high cost and the effects upon personnel not selected for assessment and those who do poorly in the assessment evaluations. Future directions of the assessment technique are expected to relate to equal opportunity legislation and court decisions, equal employment opportunities for women, and the area of management development.

Conclusions

Based upon the research conducted for this study, the following conclusions are reached:

1. The Peter Principle and executive obsolescence do exist and are problems that management must confront. Executive obsolescence has a more encompassing definition and hence is better for problem recognition.

2. The personnel selection and identification process can provide a real means of decreasing the organization's exposure to managerial incompetence.

3. There is questionable validity surrounding many procedures for personnel selection. Its recognition is noted also in the continuing search for better selection and identification methods.

4. The assessment center is an acceptable method of personnel selection which shows a good positive validity when properly designed and utilized.

5. Use of the assessment center has several valuable benefits, not related to selection, to which the company can avail itself.

6. The assessment center technique can allow an organization to minimize its exposure to the detrimental effects of managerial incompetence or executive obsolescence.

These results do not mean that the assessment center method of personnel selection should be used by all firms; it probably should not. Its cost may be prohibitive to some firms. Others do not have a sufficient requirement for developing managers to warrant this type program. Some firms desire to promote solely on the basis of seniority. Serious employee resentment to the apparent disregard of

seniority principles could preclude its use, although this problem has not surfaced in any of the studies reviewed. Conceivably, a firm could be better off with contented employees under a weak supervisor than with rebellious employees under a strong supervisor. Firms with strong family backgrounds may want to insure firm control over those selected to management positions. These philosophies cannot be labeled bad necessarily, providing laws are not violated. They all can, and perhaps should, be practiced. The important point is that each firm should use a selection policy which, for its purposes, provides the best management for the firm. The assessment center has done this for some firms, and there are indications that this technique is capable of doing it for more organizations.

As for being able to minimize, or reduce, incompetence in management, it is apparent that the assessment technique has already done this and will probably do more. Firms have reported better performance from and better satisfaction with assessed managers. There have been reports of improvements in appraisal systems. These results are reductions in incompetence. The selection of personnel based upon potential, rather than upon past

performance, indicates a look at the possibility of future poor performance. The technique allows the rejection of those people with low potential. Perhaps the greatest help in this area lies in the applications to management development. By knowing the abilities of employees, development programs can be designed to either develop personnel so that their ability curves remain above job requirement curves, or constrict job requirement curves to remain below, but close to, employees' ability curves.

To quote Byham:

While the effectiveness of an assessment center has not been proved beyond a shadow of a doubt, all the research, both published and unpublished, seems to indicate that the method has more validity than other existing methods. It is in this comparison that the strength of an assessment center lies. Granted that it is not perfect, it seems that using an assessment center for identifying management potential is a sounder and fairer method than those traditionally used by management.¹

For these reasons, the assessment center can be regarded as a potentially effective technique in the manager's "repertory of tools" for selection and development purposes.

¹Byham, "Assessment Centers For Spotting Future Managers," 160.

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